UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/608,853	06/27/2003	L. Roger Doherty	3660	8744

7590 12/28/2005

Law Offices of Albert S. Michalik, PLLC
Suite 193
704 -228th Avenue NE
Sammamish, WA 98074

EXAMINER	
WANG, DIANA S	

ART UNIT	PAPER NUMBER
2115	

DATE MAILED: 12/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/608,853	DOHERTY ET AL.	
	Examiner	Art Unit	
	Diana S. Wang	2115	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 June 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15 and 24-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *16-23* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

SHAHID ALAM
PRIMARY EXAMINER

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1 – 33 are pending in this application.

Election/Restrictions

2. Restriction to one of the following invention is required under 35 U.S.C. 121:

I. Claims 1 – 15 and 24 – 33, drawn to a method for receiving a query, decomposing the query and executing the query, classified in class 707, subclass 3.

II. Claims 16 – 23, drawn to a computer environment having a three tier architectural environment: a client, a middle tier and a backend database server, classified in class 707, subclass 100.

The inventions are distinct, each from the other because of the following reasons:

Inventions as listed in Group I and Group II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant cases, inventions of these two groups has separate utility such as follow:

Group I teaches a method for receiving a query, decomposing the query and executing the query in a web services UDDI environment. Group II teaches a computer environment having a three tier architectural environment: a client, a middle tier and a backend database server. See MPEP § 806.05(d).

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

During a telephone conversation with Mr. Albert S. Michalik on December 12, 2005 a provisional election was made without traverse to prosecute the invention of Group I, claims 1 – 15 and 24 – 33. Affirmation of this election must be made by applicant in replying to this Office action. Claims 16 – 23 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 – 15 and 24 – 33 are rejected under 35 U.S.C. 102(e) as being anticipated by US Pub 2003/0187841 A1 issued to Liang-Jie Zhang, et al ("Zhang").

With respect to claim 1, Zhang teaches a method of receiving a query comprising a plurality of search arguments (Figure 1, element 12, Figure 6, element 601, page 3, paragraph [0043]); decomposing the query into component parts corresponding to the search arguments (Figure 6, element 602, page 3, paragraphs [0043,0044]); executing a primitive search of a database for each component part to obtain a key list comprising at least one key (Figure 1, elements 17,18, 105, Figure 6, elements 603, 604, pages 3 – 4, paragraphs [0043, 0047, 0048] "where the local UDDI Category Database maintains a list of keywords to be used in subsequent searches"); and executing at least one database operation using data of the key list to retrieve results (Figure 1, elements 17,18,105, Figure 6, element 607, pages 3 – 4, paragraphs [0047,0048, 49,0050,0051]).

With respect to claim 2, Zhang teaches to return the results in response to the query (Figure 1, elements 17,18,105, Figure 6, element 606, pages 3, paragraph [0044]).

As to claims 3 and 27, Zhang teaches to validate the request (Figure 1, element 102, page 3, paragraph [0046] "the search engine will send an acknowledgement to the requester").

As to claim 4, Zhang teaches that for each primitive search that is executed, receiving a value indicative of a number of keys, and determining whether the number of keys keys indicates that no match was found for a given search argument (Figure 1, elements 7,18,105, pages 3 – 4, paragraphs [0044, 0047,0048, 0049]: "serving as an intelligent agent, if there is no target UDDI registries specific USML, it may automatically dispatch the UDDI search commands to a best-known UDDI registry based on its experience and intelligence").

As to claims 5 and 28, Zhang teaches that filtering results of the primitive search based on information received with the query such that the key list contains a filtered subset of returned keys (Figure 1, element 18, page 3, paragraph [0044]).

As to claim 6, Zhang teaches for committing the search (Figure 1, elements 19,101, 102, page 3, paragraph [0045]).

As to claims 7 and 29, Zhang teaches that committing the search includes sorting the key list based on information received with the query (Figure 1, element 105, Figure 6, element 607, page 3, paragraph [0048]:"the local UDDI Category Database is used to efficiently store UDDI categories based on a predetermined reorganizations").

As to claim 8, Zhang teaches that executing a primitive search of a database for each search argument to obtain a key list comprises, maintaining a staging area including a key set of at least one key returned from a primitive search, and combining the key set with another key returned from another primitive search (Figure 1, elements 17,18,105, pages 3 – 4, paragraphs [0047,0048,0049,0050,0051] the local UDDI Category Database provides the staging area).

As to claims 9 and 26, Zhang teaches that the other primitive search corresponds to a different search argument, and wherein combining the key set comprises performing an AND-ing of keys (page 5, paragraphs [0072, 0073]).

As to claims 10 and 25, Zhang teaches that the other primitive search corresponds to a common search argument, and wherein combining the key set comprises performing an OR-ing of keys (page 5, paragraphs [0072, 0073]).

As to claim 11, Zhang teaches that determining which of the search arguments is likely to be most selective with respect to receiving keys, and further comprising ordering the search argument data such that the search argument that was determined as most likely selective is used first in executing the primitive search of the database (Figure 1, elements 17,18,105, page 4, paragraphs [0049, 0050]:"serving as an intelligent agent, local Category Database can be used to store and re-organize the UDDI category based on its knowledge and self-updating mechanism").

As to claim 12, Zhang teaches for associating a context identifier with the search request (page 5, paragraphs [0066, 0072, 0079, 0080]).

As to claim 13, Zhang teaches that the query is received in an XML message, and wherein returning the results comprises formatting an XML response message (page 4, paragraphs [0052, 0055]).

As to claim 14, Zhang teaches that the query is received in an UDDI find request (page 2, paragraphs [0019,0035]).

As to claims 15 and 30, Zhang teaches that a computer-readable medium having computer-executable instructions for performing the method of claim 1(Figure 15, element 500, page 9, paragraphs [0150, 0151]).

As to claim 24, Zhang teaches that in a computing environment, a method comprising:

a) receiving a client query comprising a plurality of search arguments (Figure 1, element 12, Figure 6, element 601, page 3, paragraph [0043]);

b) decomposing the query into component parts corresponding to the search arguments (Figure 6, element 602, page 3, paragraphs [0043,0044]);

c) ordering the component parts and selecting a first component part as a selected component part based on the ordering (Figure 1, elements 17,18,105, page 4, paragraphs [0049, 0050]: "serving as an intelligent agent, local Category Database can be used to store and re-organize the UDDI category based on its knowledge and self-updating mechanism").

d) executing a primitive search of a database for the selected component part (Figure 6, elements 603, 604, 607, pages 3 – 4, paragraphs [0043,0047,0048]);

e) combining the result of the search with any previous search results in a combined result key list (Figure 1, elements 17, 18, 105, page 3 – 4, paragraphs [0044, 0047, 0048, 0049, 0050], per paragraph [0047]: "the UDDI Source Dispatching Broker 17 and Information Aggregation & Fusion Broker 18, both have a priori knowledge of the meanings of specific categories and the ability to cross-reference across multiple categories", and per paragraph [0050]: "local Category Database 105 can be used to store and re-organize the UDDI category based on its knowledge and self-updating mechanism").

f) determining whether the combined result key list includes at least one key (Figure 1, elements 17, 18, 105, pages 3 – 4 paragraphs [0044, 0047, 0048]),

1) and if not, terminating the process and returning a response indicative of no match found (Figure 6, elements 607, 608, pages 3 – 4, paragraphs [0044, 0049]);

2) and if so, determining whether a next component part remains to be searched, and if so, selecting that next component part as the selected component part and returning to d) (Figure 6, elements 607, 608, pages 3 – 4, paragraphs [0044, 0049]); and if not, continuing to g)

g) using data of the key list to retrieve results from the database (Figure 1, elements 17,18,105, Figure 6, element 607, pages 3 – 4, paragraphs [0046, 0047, 0048, 0049, 0050]; and

h) returning a response including the results to the client query (Figure 1, elements 17,18,105, Figure 6, element 610, pages 3, paragraph [0046]).

Claim 31 is essentially the same as claim 1 except that it set forth the claimed invention as a system rather than a process and are rejected for the same reasons as applied hereinabove.

Claim 32 is essentially the same as claim 14 except that it set forth the claimed invention as a system rather than a process and are rejected for the same reasons as applied hereinabove.

Claim 33 is essentially the same as claim 2 except that it set forth the claimed invention as a system rather than a process and are rejected for the same reasons as applied hereinabove.

Contact Information

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Diana S. Wang whose telephone number is 571-272-6522. The examiner can normally be reached on 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas C. Lee can be reached on 571-272-3667. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Diana S Wang
Examiner
Art Unit 2115

December 13, 2005

SHAHID ALAM
PRIMARY EXAMINER